

REMARKS

Applicants have carefully considered the February 22, 2008 Office Action, and the comments that follow are presented in a bona fide effort to address all issues raised in that Action and thereby place this case in condition for allowance. Claims 1-2 and 4-9 are pending in this application. Entry of the present response is respectfully solicited. It is believed that this response places this case in condition for allowance. Hence, prompt favorable reconsideration of this case is solicited.

Claims 1, 2, 4 and 6-9 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Kohno et al. (U.S. Pat. No. 7,276,742, hereinafter "Kohno") in view of Bhat et al. U.S. Pat. App. Pub. No. 2003/0025212, hereinafter "Bhat"). Applicants traverse.

The Examiner asserted that Kohno discloses the subject matter of independent claims 1 and 2, but for an angle between a normal to the inclined surface and a crystal surface on which the light-emitting layer grows is equal to an angle at which light emitted by the light-emitting layer is totally reflected toward the translucent substrate. See page 3 of the Office action. Nonetheless, the Examiner asserted that Bhat, at Fig. 3A, discloses the deficiency of Kohno in a light emitting diode in order to minimize the loss of the emitted light in a light emitting device, as suggested at numbered paragraphs [0007] and [0016]. See page 3 of the Office action. The Examiner concluded that it would have been obvious to modify Kohno with Bhat in order to minimize the loss of the emitted light in a light emitting device, as suggested by Bhat. Applicants traverse.

According to the secondary reference to Bhat, the light emitted from a light-emitting layer is reflected by a high-reflection stacked film (HR STACK 21). It is generally known in the

art, that a stacked film formed by stacking low- and high-refraction dielectric materials on one another has a high reflectance. Bhat states that the HR STACK 21 is so designed as to exhibit the maximum reflectance to the light incident on it. See [0016] of Bhat. This is equivalent to simply stating that the HR STACK 21 is a film having a high reflectance.

Independent claim 1 of the present application describes, in pertinent part, a light-emitting diode wherein a side surface of the semiconductor layer is an inclined surface that is inclined relative to the first surface. An angle between a normal to the inclined surface and a crystal surface on which the light-emitting layer grows, is equal to an angle at which light emitted by the light-emitting layer is totally reflected toward the translucent substrate. Independent claim 2 similarly recites a light-emitting diode, wherein a side surface of the semiconductor layer is an inclined surface that is inclined relative to the first surface. An angle between a normal to the inclined surface and a crystal surface on which the light-emitting layer grows, is equal to an angle at which light emitted by the light-emitting layer is totally reflected toward the translucent substrate.

Thus, according to independent claims 1 and 2 of the present application, the angle between the normal to the inclined surface – which is a side surface of the semiconductor layer including the light-emitting layer – and the crystal surface on which the light-emitting layer grows, is equal to the angle at which the light emitted by the light-emitting layer is totally reflected toward the translucent substrate. Therefore, it is not essential to provide a reflective film such as Bhat's on the inclined surface. Instead, total reflection of the present claimed subject matter is achieved by setting greater than the critical angle, the angle between the normal to the inclined surface and the crystal surface. Neither Kohno nor Bhat discloses or remotely suggest anything about a critical angle. Even if the applied references are combined as suggested

by the Examiner, the claimed subject matter would not result. *Uniroyal, Inc. v. Rudkin-Wiley Corp.*, 837 F.2d 1044, 5 USPQ2d 1434 (Fed. Cir. 1988). Moreover, absent the present application as a template, one of ordinary skill in the art would not have been motivated to modify the references as suggested by the Examiner. *Panduit Corp. v. Dennison Mfg. Co.*, 774 F.2d 1082, 227 USPQ 337 (Fed. Cir. 1985). Reconsideration and withdrawal of the rejection are therefore solicited.

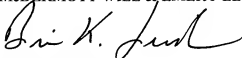
Dependent claim 5 was rejected under 35 U.S.C. § 103(a) as being unpatentable over Kohno in view of Bhat and further in view of Kawai et al. (U.S. Pat. App. Pub. No. 2001/0035580, hereinafter “Kawai”). Applicants traverse.

Applicants incorporate herein the arguments previously advanced in traversal of the rejection under 35 U.S.C. § 103(a) predicated upon Kohno and Bhat. The tertiary reference to Kawai does not cure the argued deficiencies of Kohno and Bhat. Thus, even if the applied references are combined as suggested by the Examiner, and Applicants do not agree that the requisite realistic motivation has been established, the claimed invention will not result. *Uniroyal, Inc. v. Rudkin-Wiley Corp.*, 837 F.2d 1044, 5 USPQ2d 1434 (Fed. Cir. 1988). If any independent claim is non-obvious under 35 U.S.C. § 103(a), then any claim depending therefrom is non-obvious. *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988). Reconsideration and withdrawal of the rejection are therefore solicited.

To the extent necessary, a petition for an extension of time under 37 C.F.R. 1.136 is hereby made. Please charge any shortage in fees due in connection with the filing of this paper, including extension of time fees, to Deposit Account 500417 and please credit any excess fees to such deposit account.

Respectfully submitted,

McDERMOTT WILL & EMERY LLP

A handwritten signature in black ink, appearing to read "Brian K. Seidleck", written over the printed name.

Brian K. Seidleck

Registration No. 51,321

600 13<sup>th</sup> Street, N.W.  
Washington, DC 20005-3096  
Phone: 202.756.8000 BKS:idw  
Facsimile: 202.756.8087  
**Date: May 6, 2008**

**Please recognize our Customer No. 20277  
as our correspondence address.**